Clinical Memoranda

Prominal in Epilepsy

Ten epileptics had a total of 576 grand mal fits during the months of June to November, 1934. During a similar period of time, June to November, 1935, while on prominal, the same group had only 244 grand mal fits, a decrease of 332.

Case	No. of Fits—June to November		Decrease in Number of Fits
	Year 1934	Year 1935 Prominal Therapy	
1	23	8	15
2	41	17	24
3	59	23	36
4	59	34	25
5	83	67	16
6	28	10	18
7	33	9	24
8	7	0	7
9	184	47	137
10	59	29	30

Dosage of Prominal

Four patients, Cases 1, 2, 3, and 4, were taking luminal previously to June, 1935. This drug was gradually reduced in dose, prominal being substituted as recommended by Dr. Erich Blum, director of the Mental and Nerve Hospital at Gangelt.[1]

"During the first four or five days one-third of the total luminal dosage is substituted by the equivalent therapeutic dose of prominal; during the next four or five days two-thirds of the total dosage is substituted by prominal; and in ten to twelve days the change-over is complete."

The equivalent therapeutic dose of prominal is 50 per cent. greater than that of luminal. Cases 2, 5, and 6 were taking bromide 20 grains t.d.s. up to May, 1935. Each of the ten patients was having only prominal tablets 3 grains t.d.s. by June 1st of the same year. The dosage five days later was reduced to 3 grains b.i.d., the patients having become drowsy and unsteady. This reduced dose was administered up to November, 1935. Cases 6 and 7, on prominal 3 grains b.i.d., had no fits in four and three months respectively, and Cases 1 and 8, while taking only 3 grains daily, had no fits in five and six months, respectively.

Clinical Observations

Prominal is closely allied to luminal, being N-methyl-ethyl-phenyl-malonylurea. It has no observed disadvantages as a drug; drowsiness and an unsteady gait are signs that indicate overdosage. No idiosyncrasy was noticed, no gastric or intestinal upset, and no skin rash. Blood pressure was only reduced when the dose of prominal was being taken beyond the therapeutic dose for epilepsy. Mental excitement and aggressiveness remain unchanged by prominal. It is to be noted that three days elapse before a fit occurs when prominal is discontinued, so that excretion is slow, but a daily dose does not show any cumulative effect. Not only is there the striking reduction in the incidence of fits, but the patients appear bright, cheerful, and more contented. They can now look after themselves, which previously was impossible owing to mental confusion or to being bedded to the extent of requiring a single room with complete care and attention.

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[1] *Deut. med. Woch.*, 1932, No. 18.

Reviews

THE EARLY DIAGNOSIS OF CANCER

With the object of helping general practitioners to suspect, exclude, and diagnose malignant or premalignant conditions, a book entitled *The Early Diagnosis of Malignant Disease*[1] has been compiled by five members of the staff of the Mount Vernon Hospital, Northwood. The preface and the general introduction have been written by Dr. Malcolm Donaldson, who also contributes the chapter on the diagnosis of malignant disease of the female genital organs. His collaborators are Mr. Stanford Cade, who is responsible for the chapters on the breast, the tongue, mouth and lip, the rectum, the colon, the gall-bladder, bile duct and pancreas, the stomach, the skin, and the bones; Mr. Douglas Harmer, who writes on malignant disease of the upper air passages and the oesophagus; Mr. Tudor Edwards, whose contribution deals with the lungs and mediastinum; and Mr. Ogier Ward, who deals with the urinary system and male genital organs. It will thus be seen that a very strong team has been chosen to discuss this extremely important question. Dr. Donaldson points out in the preface that as in the United Kingdom in the course of a year more than 56,000 people die from cancer, it might be thought that the medical profession had a large experience of this disease. It must be remembered, however, that there were 57,128 qualified men and women in the country to look after these patients, and that therefore each general practitioner saw only a very few patients suffering from malignant disease, a fact which made it very difficult for him to remain efficient in the diagnosis of the disease, especially in its early stages.

The object of this small book is to remind the general practitioner of the essential points in making a provisional diagnosis of cancer, and to urge the necessity of at once sending the patient to some hospital or other institution for expert opinion. Very little mention is made of treatment, as this is quite rightly considered to be outside the scope of the book. Dr. Donaldson recalls to the reader that with modern treatment many of the mutilating operations, such as removal of the upper jaw, are now unnecessary, and even in advanced cases much benefit can be derived by treatment with radium and x rays. In regard to serological and other biochemical tests for malignant disease, these must all, with the exception of the Aschheim-Zondek test for chorion epithelioma, be regarded as still in the experimental stage.

It is hardly necessary to say that the presentation of the facts by the various authors of this book, with due emphasis of important details, has been skilfully carried out. Mr. Stanford Cade, upon whose shoulders is borne so much of the burden, has a happy knack in expressing some of his strongest convictions. For instance, in writing of the breast, he says: "Early diagnosis of mammary cancer should be made with the mind's eye first, with the microscope next, and with the hands, eyes, and nose last, if ever." He holds that it is essential to regard cancer of the breast as a potential diagnosis in all abnormalities of the breast, and that confirmation must be sought by biopsy. He does not believe in the danger of a biopsy—except in the case of bone tumours—and affirms: "There is only one method of diagnosis in the very early case if suspicion of malignancy is entertained—diathermy excision of the tumour and histological verification." In the chapter on the rectum he insists that an adequate examination must be made when the slightest grounds for suspicion exist: "Every student and every practitioner should remember that he was provided with an index

[1] London: H. Milford, Oxford University Press. 1936. (Pp. 168. 8s. 6d. net.)

finger, not with the sole object of prescribing ointment for theoretically diagnosed piles, but that the main function of the medical man's index finger is to explore the rectum of his patient on the slightest provocation."

The authors are to be congratulated upon the excellence of their work and for packing so much vital information into so small a space—there are only 161 pages. This is certainly a book which should be read and pondered by all whose work brings them into daily contact with patients.

BLOOD CELL SEDIMENTATION

The study of blood cell sedimentation has during the last sixteen years come to be an important section of haematology, not only for its intrinsic and widespread interest, but for its usefulness to the laboratory worker and to the physician in the diagnosis and prognosis of many classes of diseases. The medical profession will be grateful to Dr. HANS REICHEL for *Blutkörperchensenkung*,[2] a most excellent exposition of this little-understood and complex subject. After a short historical introduction details are given of the different methods in use for estimating the variations of sedimentation rate, pointing out the precautions to be taken and the sources of error which have hitherto handicapped reliable results and their interpretations.

In discussing the theory of the subject the author deals with the physiological aspect, and gives useful values for normality and the general influences which accelerate or hinder the rate of sedimentation, indicating how in some bloods both positive and negative factors may be present together, so that the true result can be masked. A most useful summary is given of the application of the test to cases of tuberculosis in early diagnosis, during the course of the disease, in prognosis, and as guidance in treatment. Similar analysis is applied to diseases of joints, to cardiac infections, to various inflammatory conditions, to acute fevers, including pneumonia, typhoid, etc. The most attractive chapter is perhaps that which deals with anaemias and blood diseases. The discussion on pages 127 to 130, which considers in detail Stock's formulae, will well repay the reader for its interest and importance.

At the end of most chapters there is a full bibliography, and the book ends with ten pages of authors and a good general index. It is to be hoped that the publishers will see their way to offer us an English edition of this valuable work, certainly essential to the modern clinical pathologist.

THE NEURODERMATOSES

Dr. S. W. BECKER, who contributes a volume on *Commoner Diseases of the Skin*[3] to the series of National Medical Monographs published in New York, is of opinion that the recent advent of the biological era in dermatology has tended to clarify and simplify the study of diseases of the skin. He points out that with the exception of infections and neoplasms skin diseases are confined almost exclusively to human beings, who differ from animals especially in the high development of their nervous systems. We can add that they also differ in the character of their skins. No other mammals have a skin which bears any close resemblance to the human skin. They all are thickly covered with hair, except the members of the pachydermata—for example, the elephant—so in any case the wide difference between human and other mammalian integuments is obvious. This difference is a great obstacle to the advance of scientific dermatology, for the results of experiments on the skin of animals give scarcely any indication of the effects which would be produced by similar measures upon the human skin.

Dr. Becker, however, considers that many heretofore mysterious dermatoses are associated with either hyperactivity or exhaustion of the nervous system. There may be something in what he says, for, after all, the nervous system and the skin are embryologically of the same origin. Dr. Becker considers that patients suffering from the various neurodermatoses such as generalized pruritus, localized pruritus, urticaria, and so forth, are always subjects of nervous exhaustion; and, as a pupil of the late Professor Warthin, he considers that they are victims of "protoplasmic unrest." He also says that such cases are less frequent in Europe than in America, owing to the lack of high-tension work in that exhausted old Continent. Not everybody would agree with him. They are certainly common enough on this side of the Atlantic, and many observers are of opinion that people work as hard and waste less time in Europe than they do in America, though they may not make such a song about it.

Be that as it may, Dr. Becker has made an intensive study of the neurodermatoses, and this forms a feature of the volume. The keynote of his treatment appears to be the cultivation of lazy habits, including a nap after lunch. He also advocates the therapeutic employment of sunlight, both natural and artificial, and he administers the barbiturates for the purpose of reducing nervous hyperactivity. He justifies this temptation to idleness on the ground that such patients are always of an energetic temperament. We shall all agree that in the treatment of the neurodermatoses he will find ample scope for all his therapeutic ingenuity.

Apart from this section Dr. Becker's book is sound but commonplace. It is well illustrated with photographs, and there is a chapter on local treatment, with a number of useful prescriptions. But there is no reason why a British inquirer should prefer it to any of our own satisfactory textbooks on the subject.

SANITARY ENGINEERING

The city of Nineveh had its sewers and ancient Rome its aqueducts, which latter are still a standing memorial to the enterprise of their builders. At the present day we see all around us modern works for water supply and kindred purposes, as impressive as any of bygone years, testifying with no uncertain voice to the competence and energy of the sanitary engineer. In the public health administration of our time he is an outstanding figure, appealing to the popular imagination by virtue of his structures, which are conspicuous, often imposing, and as a rule most obviously effective in serving their object. The enlightened citizen beholding these marvels admires, only partially understands, and feels that he would like to know more of how they came into being. Such further insight into the principles which guide the sanitary engineer may be acquired from a book[4] by Major A. J. MARTIN, which is addressed both to engineers and to members of the lay community who are interested in public health. Of its five main sections that on water supply deals with the sources of water, hydrogeology, and purification. The article on lead in water is up to date, and the chapter on pumps tells of many ways of lifting or speeding water.

Among the other main sections that on sewage disposal is complete and informative without being tedious. A

[2] *Blutkörperchensenkung.* By Dr. Hans Reichel. Vienna: J. Springer. 1936. (Pp. 261; 30 figures. RM. 18; geb., RM. 19.60.)

[3] *Commoner Diseases of the Skin.* By S. William Becker, M.S., M.D. New York: National Medical Book Company Inc. 1935. (Pp. 283; 83 figures. 4 dollars net.)

[4] *The Work of the Sanitary Engineer. A Handbook for Engineers, Students, and Others Concerned with Public Health.* By Arthur J. Martin, Major R.A.M.C.(T.F.) (ret.), M.I.C.E. London: Macdonald and Evans. 1935. (Pp. 472; 78 figures. 16s. net.)

further important chapter is concerned with administration and another with refuse disposal. The concluding section deals with flood prevention, land drainage, and coast protection. The author writes in a lucid style and points his moral, when required, by citing episodes either grim or entertaining, as when, under the former category, he refers to the bursting of the Dale Dyke dam near Sheffield in 1864; and, under the latter, tells the tale of the Chicago drainage canal, by which certain waters of Lake Michigan, intended by nature to flow towards the Gulf of St. Lawrence, have been dispatched to find an unprecedented outlet in the Gulf of Mexico.

TREATMENT OF CHRONIC RHEUMATISM

Dr. JACQUES FORESTIER[5] has written a small book on the treatment of chronic rheumatism, in a series on "new treatments" published from the Pitié under the direction of Professor Rathery. Rheumatic conditions are divided into arthritis (rheumatoid types); arthroses (osteo-arthritic types); and algies (non-articular rheumatism). The ordinary treatments are described for these conditions, but the real interest of the book centres on the discussion of gold salt therapy, of which Dr. Forestier is a well-known exponent.

Whatever form of treatment is chosen rapid results must not be expected, and this is also true of gold therapy, since success is only to be looked for after two or three months' courses separated by seven or eight weeks. Gold salts are not useful in the osteo-arthritic types, but according to the author they are of value in almost all stages of the rheumatoid type, especially in the subacute-becoming-chronic stage. In really chronic cases, however, promising results are sometimes obtained. The first few doses should be small, to ensure that the patient is not unduly susceptible. The uses of various preparations are considered, but the author prefers solganal B. The criterion of cure should not be purely clinical, but should include a return to normal of the blood picture, and especially of the sedimentation test. Every aspect of the treatment is discussed, including the results of tests of the susceptibility of the patient, and illustrative cases are quoted at length.

All those who wish to undertake the treatment of their rheumatic cases with gold salts will do well to study this little volume.

COLLEGIATE HEALTH

It is scarcely open to question that the educated man or woman ought to possess some knowledge of the laws of health as affecting the individual and some acquaintance with the procedure by which these laws may be applied by Governments for the well-being of the nations. Adequate instruction in such matters is perhaps specially appropriate in the case of students, who while at college are under the stress of competitive mental or physical effort, and who in after life, when engaged in professions or in public administration, may become themselves responsible for the health of others. For these and kindred reasons the ruling bodies of a number of American colleges have deemed it wise to cause to be conveyed to the generality of their undergraduates—that is to say, not to students of medicine only—more explicit guidance on healthy living than is usual in this country.

In a work[6] now in its fourth edition Professor C. E. TURNER of the Massachusetts Institute of Technology presents this health instruction to students in a compendious and most readable form. His topics range from physiology and heredity, including *Drosophila* and the X-chromosome, to disease prevention, water supply, ventilation, industrial hygiene, and maternal welfare. The author enunciates sound principles and offers good advice, relieving the latter at suitable intervals with vivid or lighter touches. By citing the tragic deaths from cholera of "Mrs. E." and her niece in 1854, he brings home to the mind the lethal character of the Broad Street well. In another passage he seeks to curb too soaring ambition in his youthful readers by pointing out that the "little red schoolhouse" cannot give to every boy an equal chance of becoming President of the United States.

PHYSICAL DIAGNOSIS

Martini's Physical Diagnosis has been translated from the German, and appears under the editorship of Dr. ROBERT F. LOEB of New York.[7] The author was a pupil of Friedrich von Müller of Munich, to whom he pays due respect, and that in itself vouches for the matter of the book. Physical diagnosis refers to the results obtained from direct examination of the patient, as carried out through the application of the various senses. The methods of physical examination by observation and touch, and simple means such as the stethoscope, are set out here with accuracy, and the conclusions to be drawn in diseases of the respiratory tract and circulatory system are indicated. Each section is followed by a useful synopsis of the diseases of the system under observation, which in a rather diagrammatic summary correlates the discussion of signs observed with the physical findings as they usually appear in various disease states. A shorter section gives a résumé of the physical examination of the abdomen. Examination of limbs, joints, and the nervous system is not mentioned, and this is an omission which detracts seriously from the usefulness of the book. In a concluding chapter the essentials of a good history are given in outline. The book is clearly written, and descriptions of physical signs and their physiological basis are described in detail. In former days a small manual by Dr. Jex-Blake covered the same ground. The present volume may be regarded as an up-to-date description of the same subjects.

In a small handbook on Phonoscopy[8] Dr. ODOBLEJA of Bucarest describes the principles of the method of delimiting solid and hollow organs by listening with a stethoscope while coin or finger percussion is made in the vicinity. The author makes considerable claims for the value of the method, and applies it to the examination of the liver, heart, lungs, and abdominal organs.

CHILD PSYCHOLOGY

Those who study in detail the psychological problems of childhood have long realized the great value of the work of Professor CHARLOTTE BÜHLER, and an English translation of a small book entitled *From Birth to Maturity*[9] presents in simple form the results of research in Vienna on the development of the normal average child. The book began originally as a series of lectures to students and teachers, but it has grown considerably in the process of editing, and has completely lost the

[5] *Le Traitement des Rhumatismes Chroniques.* By Dr. Jacques Forestier. Paris: J. B. Baillière et Fils. 1934. (Pp. 99. 12 fr.)

[6] *Personal and Community Health.* By Clair Elsmere Turner, M.A., D.P.H. Fourth edition. London: H. Kimpton. 1935. (Pp. 680; 131 figures, 4 coloured plates. 12s. 6d. net.)

[7] *Martini's Principles and Practice of Physical Diagnosis.* Edited by Robert F. Loeb, M.D., from the authorized translation by George J. Farber, M.D. Philadelphia and London: J. B. Lippincott Company. 1935. (Pp. 213; 30 figures. 9s. net.)

[8] *La Phonoscopie. Nouvelle Méthode d'Exploration Clinique.* By Dr. St. Odobleja. Paris: G. Doin et Cie. 1935. (Pp. 202; 29 figures. 30 fr.)

[9] *From Birth to Maturity. An Outline of the Psychological Development of the Child.* By Professor Charlotte Bühler, Ph.D. London: Kegan Paul and Co. Ltd. 1935. (Pp. 237; 15 figures. 7s. 6d. net.)

somewhat stale stamp too often characteristic of the reproduced lecture. Indeed, it is a freshness of outlook and enthusiasm which is the main feature of a book full of interest for paediatricians, teachers, and intelligent parents. A final chapter on the influence of heredity on the psychological development of the child states, without solving, many interesting problems for future work. An appendix summarizes briefly the methods of investigation employed. These can be studied in more detail in another volume called *Testing Children's Development from Birth to School Age,*[10] in which Professor BÜHLER has been assisted by Professor HILDEGARDE HETZER, the book being a translation from the 1932 German edition by Professor Henry Beaumont of Kentucky. The purpose of the book is to indicate, especially for younger children in the pre-school age, how the older intelligence tests fall short, and to suggest other procedures which will give a fuller indication of the child's total psychological development, and particularly its behaviour in test situations. Great ingenuity is to be found in the methods evolved by the Viennese workers for the tests in the early months of life.

Notes on Books

Dr. I. MATSUO and his co-workers in the department of medicine of Kyoto University have devoted themselves for many years to the study of the distribution of dyes in the body. Their papers, which have appeared in a wide variety of journals, have been collected and published in two large volumes.[11] The first volume appeared last year and the second has just reached us. The two together contain reprints of about one hundred papers that have appeared during the last decade. They deal chiefly with the adsorption, excretion, and distribution of dyes in the body. There are also papers on the pharmacological actions of dyes. This massive piece of systematic work should prove of great value to future investigators in a wide field of medical science.

A small volume, *Bioklimatik,* edited by Dr. A. GÉRONNE (Munich, J. F. Bergmann) contains the proceedings of the recent conference on bioclimatology, held at Wiesbaden and convened by three German medical societies—those of internal medicine, of balneology and climatology, and the society for combating rheumatism. The discussion of climate in relation to health has a philosophical as well as a medical interest. Thus Dr. Schittenhelm of Munich emphasized the diurnal and seasonal rhythms observable in plant and animal life, as shown in the variations of blood calcium and iodine and of the alveolar tension of carbonic acid gas. Disturbances of rhythmical response and difficulties of readjustment were important factors in many forms of disease. Professor Linke of Frankfurt sought to analyse these modifying influences in climate. The modern study of bioclimatology had taught many lessons—the complexity of the equation, the value of *combinations* of meteorological elements, the gross fallacies that arose from reliance on averages, which concealed the facts. A diurnal variation might cover 35 degrees of temperature as well as wide ranges of light and humidity, which normally produced a physiological response. The medical man also had to study the *un*periodical changes of weather, which seriously tested the power of adaptation of a "surprised organism." Many other contributions of practical interest are contained in these proceedings, such as the paper by Dr. Pfleiderer of Kiel on the meteorophysiology of heat regulation, with studies of the climates of altitude, of "middle heights," and of the sea coast, supported by research data from the bioclimatic institutes of Germany.

[10] *Testing Children's Development from Birth to School Age.* By Professor Charlotte Bühler, Ph.D., and Professor Hildegarde Hetzer, Ph.D. Translated from the first German edition (1932) by Professor Henry Beaumont, Ph.D. London: G. Allen and Unwin Ltd. 1935. (Pp. 191; 48 figures. 12s. 6d. net.)

[11] *Biologische Untersuchungen über Farbstoffe.* By Dr. Iwao Matsuo. Vols. i and ii.

THE LONDON AMBULANCE SERVICE

On April 1st, 1930, the Local Government Act, 1929, came into operation, which transferred to the London County Council the powers of the late Metropolitan Asylums Board and twenty-one boards of guardians, and, with these powers, the ambulance services formerly maintained by these authorities.

As long ago as 1909 the Council had itself obtained powers to establish an ambulance service, mainly to deal with street accidents. Some time elapsed before these powers were exercised, and the London Ambulance Service came into being in 1915, with a fleet of eight motor ambulances, six ambulance stations—temporary buildings constructed of corrugated iron—and a staff of about fifty drivers and ambulance attendants. Two of these temporary buildings are still in existence, but they will be replaced during the coming year by two modern brick-built buildings, one at Lee and one at Shoreditch, each capable of accommodating three or more ambulances.

Progress Since 1915

By 1930 the Council's service had fourteen stations, twenty-one ambulances, and a total staff of nearly 200 persons, while that of the late Metropolitan Asylums Board had 107 ambulances, six large ambulance stations, each with a capacity for housing some twenty-five vehicles, and a staff of 270. The various small ambulance services maintained by the late boards of guardians to serve their hospitals, or "infirmaries" as they were then called, were also swept into the net, and one comprehensive service was inaugurated to deal with the needs of the 117 square miles which the Council administers.

The first step was to establish a system of central control for the united service. Such a system had already been adopted by the Council for its original service and also to some extent by the Metropolitan Asylums Board. The administration of the two larger services was first of all centralized, and at a later date the smaller guardians' services were gradually absorbed. While the reorganization was being carried out the work of the Ambulance Service continued, and the changes were effected without causing any disturbance to the daily round.

The Central Switchboard

A centre with a large telephone switchboard was provided—a miniature exchange through which every call for an ambulance passes—and this is now installed at the head quarters of the London Ambulance Service, on the sixth floor of County Hall.

This switchboard, which is maintained by the London Telephone Service, is provided with twenty in-coming lines, on any one of which calls may be received, and two other lines for service purposes. There are now twenty-two ambulance stations, and each is connected by a private line with the central switchboard, so that the officers who manipulate the switchboard can communicate directly with any ambulance station without calling upon the telephone exchanges. The exchanges can be used in emergency, however, as every station is equipped with an independent telephone instrument with an exchange number. As a further precaution there is an emergency switchboard in the basement of County Hall which can be placed into immediate operation in the event of a breakdown.

The switchboard is divided into two parts. One side deals with applications for removals of patients to hospitals, which are so numerous—over 1,000 cases have been received in one day—that the calls are relayed to another room, where there is a staff of ambulance clerks whose duty it is, on receiving an application, to make arrangements for a bed for the patient and for the dispatch of the ambulance. In normal circumstances the removal is effected within an hour. A system of coloured electric lights—red, to indicate when an emergency ambulance at a particular station is out, and green, to show when the ambulance arrives at the hospital—is installed in the switchboard room and duplicated in the room occupied by the ambulance clerks.